Listing of the Claims

This listing of claims will replace all prior versions and listings of the claims in this application.

1. (Original) A method of screening for an agent effective in the treatment of a cancer, which method comprises:

a) selecting a putative agent that is likely to disrupt a function mediated by a critical normal gene product, which function is required for the successful division and continued cell survival of cancer cells, and which function is not required for the successful division and continued cell survival of control cells;

b) treating a cancer cell sample and a control cell sample with the putative agent, and determining the cytotoxic effect of, and/or the growth inhibiting effect of the putative agent on these samples; and

c) identifying an effective agent as an agent which is more cytotoxic to, and/or more inhibiting to the growth of the cancer cell sample than the control cell sample.

2. (Original) The method according to claim 1, wherein the critical normal gene product is a factor which impedes progress through the cell cycle, an anti-apoptotic factor or a master regulatory gene product which regulates the levels of other gene products involved in the cell cycle and apoptosis pathways.

3. (Currently amended) A method according to claim 1 ~~or claim 2~~, in which the cancer cell sample consists of one or more cancer cells in which the ratio of the levels of the CDK1 and CDK4 gene products is in the range of 0.6 to 1.6.

4. (Currently amended) A method according to claim 3, wherein the step of identifying an effective agent further involves determination of the ratio <u>of</u> the levels of the

CDK1 and CDK4 gene products in the cancer cell sample before and after treatment with the putative agent, wherein an effective agent is identified as an agent capable of altering the ratio in the levels of the CDK1 and CDK4 gene product in a cancer cell sample.

5. (Currently amended) A method according to claim 3 ~~or claim 4~~, wherein the cancer cell sample consists of cells in which the CDK1 and CDK4 gene products are both elevated as compared with control cells.

6. (Original) A method according to claim *5,* wherein the step of identifying an effective agent further involves determination of the levels of the CDK1 and CDK4 gene products in the cancer cell sample before and after treatment with the putative agent, wherein an effective agent is identified as an agent which is capable of reducing the levels of the CDK1 and CDK4 gene products below those observed in the untreated cancer cell sample.

7. (Currently amended) A method according to claim 3 ~~claims 3 to 6~~, wherein the critical normal gene product is human CDK4, and the function required for successful division and continued cell survival of cancer cells, which function is not required for the successful division and continued cell survival of control cells is a function other than kinase activity.

8. (Original) A method according to claim 7, wherein the region of the human CDK4 gene product mediating the function required for the successful division and continued cell survival is a region between amino acids 172-285.

9. (Original) A method of screening for an agent effective in preventing a cancer from undergoing metastasis, which method comprises:

a) selecting a putative agent that is likely to disrupt a function mediated by a critical normal

gene product for metastasis, which function is required for metastasis;

b) determining the ability of a sample of metastatic cancer cells to undergo metastasis in the presence of said agent; and

c) identifying an effective agent as an agent which, when present, reduces the ability of said sample of metastatic cancer cells to metastasise;

wherein said putative agent is a peptide or protein.

10. (Original) A method according to claim 9, wherein said critical normal gene product for metastasis is a protease, a proteins associated with cell adhesion, a protein associated with motility or a master regulatory gene product which regulate the levels of gene products involved in all aspects of carcinogenesis.

11. (Original) An agent for use in medicine, which agent is capable of disrupting a function of a critical normal gene product, which function is required for the successful division and continued cell survival of cancer cells, and which function is not required for the successful division and continued cell survival of control cells, and which agent is more cytotoxic to, or more inhibiting to the growth of a cancer cell sample than a control cell sample.

12. (Original) An agent according to claim 11, wherein the agent is an antisense oligonucleotide having the sequence set out in SEQ ID NO:2.

13. (Original) An agent for use in medicine, which agent is capable of disrupting a function of a critical normal gene product for metastasis in such a manner as to reduce the ability of a metastatic cancer cell sample to metastasise.

14. (Currently amended) A pharmaceutical composition comprising the agent defined in claim 11 ~~any of claims 11 to 13~~, and a carrier, diluent or excipient.

15. (Currently amended) A method of manufacturing a pharmaceutical composition, which method comprises identifying an effective agent according to the screening method defined in claim 1 ~~any of claims 1 to 10~~, and manufacturing a pharmaceutical composition comprising said effective agent.

16. (Canceled).

17. (Canceled).

18. (Currently amended) A method of treating a patient having cancer comprising:

a) identifying a critical normal gene product present in said cancer; and
b) treating the patient with an agent capable of disrupting a function mediated by said critical normal gene product, which function is required for the successful division and continued cell survival of cancer cells, and which function is not required for the successful division and continued cell survival of control cells, and which agent is an agent as defined in claim 11 ~~or claim 12~~.

19. (Original) A method of treating a patient having metastatic cancer comprising:

a) identifying a critical normal gene product for metastasis present in said cancer; and
b) treating the patient with an agent capable of disrupting a function mediated by said critical normal gene product for metastasis, which function is required for metastasis, and which agent is an agent as defined in claim 13.

20. (Currently amended) A method of selecting a treatment for a patient having a cancer, which method comprises:

a) identifying a critical normal gene present in said cancer; and

b) selecting an agent for treatment which agent is capable of disrupting a function mediated by said critical normal gene product, which function is required for the successful division and continued cell survival of cancer cells, and which function is not required for the successful division and continued cell survival of control cells, and which agent is an agent as defined in claim 11 ~~or claim 12~~.

21. (Original) A method of selecting a treatment for a patient having metastatic cancer, which method comprises:

a) identifying a critical normal gene product for metastasis present in said cancer; and

b) selecting an agent for treatment which agent is capable of disrupting a function mediated by said critical normal gene product for metastasis, which function is required for metastasis, and which agent is an agent as defined in claim 13.

22. (Currently amended) A kit for selecting and providing a suitable treatment for a patient having a cancer comprising:

a) a means for identifying a critical normal gene product present in said cancer; and

b) an agent capable of disrupting a function of said critical normal gene product which function is required for the successful division and continued cell survival of cancer cells but not control cells, which agent is an agent as defined in claim 11 ~~or claim 12~~.

23. (Original) A kit for selecting and providing a suitable treatment for a patient having metastatic cancer comprising:

a) a means for identifying a critical normal gene product for metastasis present in said cancer; and

b) an agent capable of disrupting a function of said critical normal gene product which function is required for metastasis, which agent is an agent as defined in claim 13.

24. (Original) A method for identifying a critical normal gene product, which method comprises:

a) detection of a gene product in L23COR cells that are quiescent or proliferating;

b) detection of said gene product in dying L23COR cells; and

c) identifying a critical normal gene product as a gene product which is present at higher levels in quiescent or proliferating L23COR cells than in dying L23COR cells.

25. (New) A pharmaceutical composition comprising the agent defined in claim 13, and a carrier, diluent or excipient.

26. (New) A method of manufacturing a pharmaceutical composition, which method comprises identifying an effective agent according to the screening method defined in claim 1, and manufacturing a pharmaceutical composition comprising said effective agent.

27 (New) A method of manufacturing a pharmaceutical composition, which method comprises identifying an effective agent according to the screening method defined in claim 9, and manufacturing a pharmaceutical composition comprising said effective agent.

28. (New) A method of treating a patient having cancer, which method comprises treating the patient with an agent defined in claim 11.